

CLAIMS:

1. Recordable record carrier having a user area (UA) for storing user data and a management area (MA) for storing management data, said management area comprising a main file system area (70) for storing main file system data (mFS) of a main file system,
 - 5 a virtual file system area (71) for storing virtual file system data (vFS) of a virtual file system in raw format, and an indicator area (72) for storing an indicator (ID) indicating whether the main system data (mFS) and the virtual file system data (vFS) are consistent.
- 10 2. Record carrier as claimed in claim 1, wherein said virtual file system area (71) comprises a static area for storing static parts of said virtual file system data and a volatile area for storing volatile parts of said virtual file system data (vFS) so that, if the indicator (ID) indicates an inconsistency between the main file system data (mFS) and the virtual file system data (vFS), only the volatile parts of the virtual file system data (vFS) need to be
15 reconstructed from the main file system data (mFS).
3. Record carrier as claimed in claim 1, wherein said indicator (ID) comprises the last update date of the main file system data (mFS) and of the virtual file system data (vFS).
- 20 4. Record carrier as claimed in claim 1, wherein said indicator (ID) comprises a flag which is set when the virtual file system data (vFS) are updated, indicating that the virtual file system data (vFS) are valid, and which is reset when the main file system data (mFS) are updated independently, indicating that the virtual file system data (vFS) are invalid.
- 25 5. Record carrier as claimed in claim 1, wherein said indicator area (72) is present in an easily accessible location, in particular in a disk navigation area (DN), in a logical volume integrity descriptor (LVID), or in a chip in the record carrier (7).

6. Record carrier as claimed in claim 1, wherein said virtual file system area (71) further comprises a directory area for storing the directory structure of the virtual file system.

7. Record carrier as claimed in claim 1, wherein said main file system is a
5 Universal Disc Format (UDF) file system, and wherein said virtual file system is a File Allocation Table (FAT) file system.

8. Recording apparatus for recording information on a recordable record carrier
(7) having a user area (UA) for storing user data and a management area (MA) for storing
10 management data, said apparatus comprising

- recording means (6) for recording main file system data (mFS) of a main file system in a main file system area (70) of said management area (MA), virtual file system data (vFS) of a virtual file system in raw format in a virtual file system area (71) of said management area (MA), and an indicator (ID) indicating whether the main file system data (mFS) and
15 the virtual file system data (vFS) are consistent in an indicator area (72) of said management area (MA),
- reading means (6) for reading said user data and said management data,
- memory means (8) for storing said virtual file system data (vFS),
- conversion means (9) for converting said main file system data (mFS) into said virtual
20 file system data (vFS) and vice versa for storage on the record carrier (7) and/or for output to an external host device (2, 3) if said indicator (ID) indicates an inconsistency between the main file system data (mFS) and the virtual file system data (vFS), and
- an interface (4, 5) for communicating with a host device (2, 3).

25 9. Recording apparatus as claimed in claim 8, wherein said recording means (6) and said reading means (6) are adapted for accessing an optical disk (7), in particular a small form factor optical disk using a universal disc format, and wherein said interface (4) is adapted for communicating with a compact flash form factor drive (2) using a file allocation table system.

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10. Recording apparatus as claimed in claim 8, wherein said memory means (8) comprise a MRAM unit.

11. Recording method for recording information on a recordable record carrier (7) having a user area (UA) for storing user data and a management area (MA) for storing management data, said method comprising the steps of

- reading main file system data (mFS) of a main file system stored in a main file system area (70) of said management area (MA),
- converting said main file system data (mFS) into said virtual file system data (vFS) for storage on the record carrier (7) and/or for output to an external host device (2, 3),
- storing said virtual file system data (vFS) in a virtual file system area (71) of said management area (MA) in raw format,
- 10 - storing an indicator (ID) indicating whether the main system data (mFS) and the virtual file system (8) data (vFS) are consistent in an indicator area (72) of said management area (MA).

12. Recording method for recording information on a recordable record carrier (7) having a user area (UA) for storing user data and a management area (MA) for storing management data, said method comprising the steps of

- reading an indicator (ID), which indicates whether main file system data (mFS) of a main file system stored in a main file system area (70) of said management area (MA) and virtual file system data (vFS) of a virtual file system stored in raw format in a virtual file system area (71) are consistent, from an indicator area (72) of said management area (MA),
- reading said main file system data (mFS) from said main file system area (70) and reconstructing at least part of said virtual file system data (vFS) from said main file system data (mFS) if said indicator (ID) indicates an inconsistency,
- 20 - reading at least part of said virtual file system data (vFS) from said virtual file system area (71), and
- exposing the virtual file system data (vFS) to an external host device (2).

13. Recording method as claimed in claim 12, further comprising the steps of

- 30 - setting the indicator (ID) such that it indicates an inconsistency if the virtual file system data (vFS) and/or the main file system data (mFS) are changed, and
- storing the set indicator (ID) in said indicator area (72).

14. Computer program comprising computer program means for causing a computer to perform the steps of the method as claimed in claim 11 or 12 when said computer program is run on a computer.